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February 1984

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Arcade Alley

A Critical Look at Video Games

by Bill Kunkel & Arnie Katz



The 1984 Arcade Awards, Part II

This month's "Arcade Alley" is devoted to announcing the 1984 Arcade Award winners in the Computer Game and Video-Game/Computer-Game divisions. For the past five years Reese Communications has sponsored these awards to salute and promote achievement in the design of electronic games. The Arkie and Certificate of Merit winners were selected by more than 5000 game lovers who returned the official ballot printed in an issue of VIDEO's sister publication, *Electronic Games*. The first envelope, please.



Computer-Game Division

■ **1984 Computer Game of the Year: Lode Runner** (Broderbund/Apple II, Atari computers, Commodore 64). An outstanding design by rookie Doug Smith, "Lode Runner" celebrates the current trend of mixing strategy with play action. "Lode Runner" is the thinking player's climbing contest because it takes solid strategic planning as well as a quick hand to conquer the disk's 150 (count 'em) playfields. For those of you who manage to achieve this goal, the program provides a simple system that allows you to design your own customized "Lode Runner" screens. This solitaire hunt for hidden gold is fascinating, combining a few play elements into an irresistible mixture that truly challenges both mind and body.

Certificates of Merit: "Repton" (Sirius/Apple II, Ataris); "Shamus, Case II" (Synapse/Ataris).

■ **1984 Best Science Fiction/Fantasy Computer Game: Astro Chase** (First Star-Parker Brothers/Ataris). This slam-bang space battle is the first action hit for Fernando Herrera, who had won acclaim as the creator of Atari's educational "My First Alphabet." "Astro Chase" is a slick program that shows the same flair characterized in Herrera's earlier effort. The animated intermissions are especially impressive. The goal is to eliminate the enemy mines and fighters which are flying through the multi-screen playfield toward a defenseless Earth. A radically new fire-and-movement system lets you move the craft in one direction while firing in any other.



In defense of Earth with the Atari-compatible 'Astro Chase' (above); Broderbund's 'Lode Runner' took top honors.

Certificates of Merit: "Caverns of Frietag" (Muse/Apple II); "Star-Maze" (Sir-Tech/Apple II); "Suspended" (Infocom/most computers).

■ **1984 Best Computer Adventure: Witness** (Infocom/most computers). If you think text adventures are passe, you should know that Infocom's prose programs have run away with the Arcade Award in this category for two years in a row. It seems many computerists prefer to conjure up their own mental pictures—perhaps aided by the lavish documentation Infocom supplies with each of its titles in addition to the relatively simple illustrations found in pictorial quest games. As the super sleuth, you must solve this 1930s-era mystery before the time limit elapses. This includes questioning suspects, sifting clues, and using deductive reasoning to close a murder case that begins before the detective's eyes.

Certificates of Merit: "Aztec" (Data Most/Apple); "Dark Crystal" (Sierra On-Line/Apple, Ataris); "Knight of Diamonds" (Sir-Tech/Apple).

■ **1984 Best Computer Sports Game:**

Starbowl Football (Gamestar/Ataris). This is the second straight year that a football game for the Atari family of computers has won this award. As good as last year's "Cypher Bowl" was, this one is even better. "Starbowl Football" features a comprehensive simulation of gridiron action in a format that allows human coaches to work on-field miracles with a few flicks of the joystick. Its advantage over other football programs is that it can be played solitaire against the computer. In fact, you'll have to execute like a Super Bowl champion to have any chance of beating the machine's team.

Certificates of Merit: "Baja Buggies" (Gamestar/Ataris); "Knockout!" (Avalon Hill/Ataris); "International Soccer" (Commodore/Commodore 64).

■ **1984 Best Computer Action Game: Centipede** (Atari/Ataris). "Centipede" 's rock 'em sock 'em approach to gardening has made this game popular in all available formats—some veteran bug-blasters even insist that this Atari cartridge is the best home-arcade edition you can buy. The player uses a joystick or trackball to move the shooter horizontally and (to some extent) vertically around the lower portion of the playfield. The object is to shoot the multi-segmented centipedes that wriggle down the screen between rows of mushrooms, all the while avoiding deadly contact with the garden's other denizens. "Centipede" packs a real roundhouse punch.

Certificates of Merit: "Jumpman" (Epyx/Ataris); "River Raid" (Activision/Ataris); "Sea Fox" (Broderbund/Apple, Ataris).

■ **1984 Best Computer Game Audio-Visual Effects: Gorf** (Roklan/Ataris). This home edition of Bally-Midway's coin-op amassed one of the largest vote totals in the 1984 competition. It out-pollled the other excellent versions of Gorf, including those by Coleco (for ColecoVision) and Commodore (Commodore 64). The varied action—even with the omission of the original's "Galaxian"-like phase—is what keeps players coming back again and again, and the sequence where alien attackers swirl out of a hyperspace warp is visually riveting as well as tough to master.

Certificates of Merit: "Old Ironsides" (Xerox/Apple); "Transylvania" (Penguin/Apple II).

Video-Game/Computer-Game Division

■ **1984 Most Humorous Video Game/Computer Game: Olnk!** (Activision/Atari 2600). Remember the fairytale about the three little piggies and the big bad wolf? It's back, this time as the plot for Mike Lorenzen's creation. The wolf tries to huff and puff and blow down the houses of straw, wood, and brick inhabited by the pint-size porkers. The pigs, meanwhile, must frantically pull building material from the roof and shove it into the gaps in the walls made by the attacking wolf. The player gets points for every packet of bricks, wood, or straw the pigs place in a wall—but if the wolf succeeds in pulling a pig through a gap, the little critter runs all the way home to the jeers of its tormentor.

Certificates of Merit: "Free Fall" (Sirius/Apple); "K.C.'s Krazy Chase" (Odyssey/Odyssey²); "Preppie! II" (Adventure International/Ataris).

■ **1984 Best Arcade-to-Home Video Game/Computer Game Translation: Kangaroo** (Atari/Atari 5200). Making a translation look right in the home is still the biggest challenge designers face—especially since coin-op manufacturers stress graphics so heavily. No problem for the anonymous programmer of "Kangaroo," who seems to be fully in command of his or her art. This is a virtual duplicate of the climbing game which raked in so many quarters during 1983. As you guide the mama kangaroo on her rescue mission, almost all aspects of the game look and play the way they do on the coin-op. A translation needs no further or higher praise.

Certificates of Merit: "Frogger" (Parker Brothers/Ataris); "Kick-Man" (Commodore/Commodore 64); "Turtles" (Odyssey/Odyssey²).

■ **1984 Best Multi-Player Video Game/Computer Game: M.U.L.E.** (Electronic Arts/Ataris, Commodore 64). The settling of a virgin planet and development of its founding colony are the main subjects of this one-to four-player strategy contest. The computerist becomes a representative of one of eight sentient races and must out-earn fellow colonists through timely trading of key commodities. "M.U.L.E." is a unique blend of boardgame strategy and computer-game pacing. Since its release, "M.U.L.E." has gained an intense cult following. Invest a couple of hours and you'll find out why.


Certificates of Merit: "Dungeon!" (TSR/Apple II); "Oil Baron" (Epyx/IBM, Apple); "Wizard of Wor" (Roklan/Ataris).

■ **1984 Most Innovative Video Game/Computer Game: Archon** (Electronic Arts/Ataris). Few games make better use of a computer's special capabilities than "Archon," an epic struggle be-

tween light and darkness which takes place on an eight-by-eight chess-like board and includes elements that would be too cumbersome without a CPU's data-crunching talent. Some of the board's squares, for example, cycle through a range of colors instead of staying static, while the changes affect the power of the beings which may attack or defend that particular square during the current turn.

Certificates of Merit: "Galactic Gladiators" (Strategic Simulations/Apple); "Pinball Construction Set" (Electronic Arts/Apple, Ataris).

■ **1984 Best Educational Video Game/Computer Game: Learning with Leeper** (Sierra On-Line/Apple II). This disk is divided into four segments and presents a painless way for youngsters to learn such tricky concepts as counting and shape recognition. Children too young to read will have a fine time with this entertaining and educational game, and the free artistic expression in the "Painting" segment should be a spur to youthful creativity.

Certificates of Merit: "Alphabet Arcade" (PDI/Ataris); "Snooper Troops, Case II" (Spinnaker/Ataris). 

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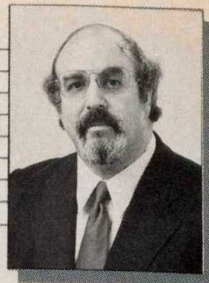
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Computer Ease

The Human Interface

by Ivan Berger



Baby Blue's Baby Brother

For months the rumor mill has been grinding merrily with speculation about IBM's new little computer, code-named Peanut. Now it's almost here (scheduled for early-1984 appearance in the stores) under the more dignified and IBM-like name of PCjr.

The Junior is not just a warmed-over (or stripped-down) PC. It offers one innovation—a keyboard connected by an infrared link to the processor—and one feature (slots for plug-in ROM cartridges) that's brand new to IBM. The Entry model, for \$669, includes 64K of "user memory" (RAM); the Extended version, for \$1269, has 128K of RAM and a single disk drive. Yes, that's rather pricey—but IBM can get away with it on the strength of its name. Both versions have an additional 64K of ROM but neither comes with a video monitor.

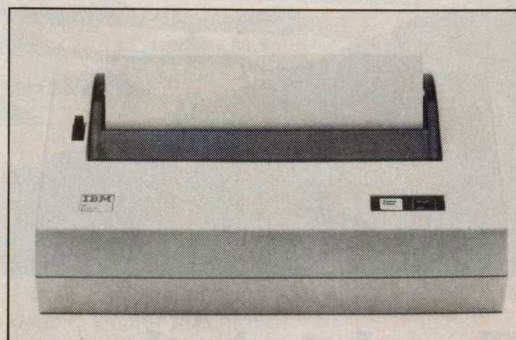
You could use the PCjr in an office, but it's intended more as a home machine. Both its features and limits make that clear.

Features first: The keyboard can be operated up to 20 feet from the computer, with no cords to trip over. That's a big help when sitting on the couch playing arcade-type games, but not so useful in an office if you're trying to read a screen full of letters and numbers. A cord is optional (\$20) in case you want to place the keyboard out of the computer's line of sight—right next to it, for instance—or to prevent interference when using several Juniors in one room.

The Junior has input/output connections for a cassette recorder, joysticks, and two ROM cartridges—all rarely used in office work. That's by no means the end of its I/O facilities, though. Other options that can be plugged in include internal (\$199) or external modems, serial and parallel printers, a light pen, a card to expand the Entry model's memory to 128K and its 40-column display to 80 columns (\$140). An RF modulator for output to TV sets, plus jacks for composite and RGM monitor connections, are standard with the machine—but the necessary connector cables are \$20 to \$30 extra.



The expanded version of PCjr (above) has twice the RAM—128K—of the basic version, but for almost twice the price (\$1269); the optional PC Compact Printer (\$175) uses continuous-roll fanfold paper and prints up to 50 characters per second.



Only one board is inside the base computer's main unit, with slots for three expansion boards (the RAM/80-column board, internal modem, and disk-drive controller). No tools are needed to install them or the disk drive. An expansion bus at the left side of the computer lets you add more, such as a parallel-printer attachment (\$99), a second disk drive (which would require its own power supply), and perhaps even a hard disk. The bus also includes an audio input, which can be "steered" by the computer to the audio monitor jack and to the audio channel of the RF modulator.

The PCjr can use just over half of the PC's programs: 33 out of 55, according

to the Junior's brochure. Only a few of the incompatible programs are strictly for business. Most would be of interest to the serious programmer including APL, FORTRAN, Learning DOS 2.00, Learning BASIC 1.00, Pascal Compiler, and UCSD p-system.

Some of the PC programs which will run on the Junior run with color limit. That's a pity, because the Junior has better graphics facilities than the PC: 640x200 pixels in four colors, with the 80-column card). Most Junior-compatible PC programs require the expansion card either for its 80-column display or extra 64K of memory. On the other hand, the PC can't use the Junior's low-cost (\$30 to \$75) program cartridges,

which are mostly games.


This brings us to the PCjr's limits. One main one is its keyboard—that seems well on the way to becoming an IBM tradition. The keyboard layout is more like that of IBM's typewriters (a definite advance over the PC) but the keys themselves are flat slabs. They offer better touch than most "Chiclet" keyboards but are still harder to type on than the sculptured keys found on most computers in the PCjr's price range. There are only 62 keys, which means there is no numeric keypad (not much of a restriction save in office use) and no separate function keys (an extra key "shifts" the top row of number keys to serve, instead). And the keyboard can be reprogrammed, either for custom applications or so that a single keystroke can initiate a chain of program steps.

The keytops are blank with key legends printed on the overwide spaces between key rows. This is supposed to facilitate use of instructional overlays (five for \$10)—but the purpose would be better served if the letters were marked on the keytops, for programs which use both alphanumeric entry and control-character commands.

The single 5-1/4-inch disk drive is compatible with the PC and holds 360K—a respectable amount, though not startling. Even for home use, one drive can be irksomely limiting; but the odds are that aftermarket suppliers like Percom and Rana will have external drives out within a few months of the Junior's introduction.

The machine is small and light enough (about 10-1/2 pounds with keyboard and disk drive but no monitor) that I wish it were portable—there will be an optional carrying case (\$60). Like most computers the Junior has BASIC in its ROM. Unlike most, you can upgrade that BASIC without adding disk drives, using a \$75 cartridge. The cartridge can also be used with a disk drive.

All in all, it's a nice little machine with, alas, a nice big price—growing bigger as you add the necessary options and cables to make it really useful. Its major limits (the single drive and super-Chiclet keyboard) can be overcome, and various aftermarket suppliers are sure to offer ways to overcome them—at the cost of a still higher price, of course.

The Junior's design is good and its 16-bit processor—though it probably won't make the Junior much if any faster than a good 8-bit machine—does let it access more memory (192K, counting ROM) than most computers in its price class. That processor also lets it share much of the vast outpouring of programs written for the PC. And since this too is an IBM, its success is sufficiently assured that there will probably be a similar outpouring of programs for the Junior itself. 



T. LAPADULA

ELECTRONIC DELIVERY

If this is 1984, then this must be the future. Of course it isn't; it is still the present. We needn't look too hard or far, though, to see what is coming in the world of video and communications systems. While today's technology will continue to amaze and amuse, the near-term *achievable* future promises less staggering though no less important developments. Not the least of these is the promise that the communications "revolution"—born of television, the microchip, and the space satellite—will come closer to delivering a world to your living-room.

The key word of the near-future is "delivery." It was also the key to the past: telephone and radio were ways of delivering the human voice beyond the range of hearing; movies and television, the means to deliver images beyond human sight. The year 1984 may be remembered as a portal to the future if only because it is the year in which so many new plans combine existing mass media and their technologies into new ones.

Information is, and always has been, a product. You can walk into a store and buy information in the form of a book, magazine, or newspaper, a movie, phonograph record, video

game, or computer program. Each of these products, however, could also be delivered to you electronically without need to leave your home and physically take possession of them.

Think of it this way. Each time you buy one of these products you are buying the milk as well as the milk bottle. That is, you buy the information along with the medium it is recorded on. If you buy a book, newspaper, or magazine, you buy the paper the words are printed on too. When you buy an audio or video disc or tape of a record or movie, you are also buying the plastic or tape that carries that music or motion picture. You buy a magnetic disk or silicon chip each time you buy a digital computer program or video game.

Wouldn't it be possible to deliver these products some other way? Why not use our own blank media to store someone else's information? We already do this, of course, and it is causing problems.

Take the example of cable television. Today, cable TV is a collection of various services, many of which differ greatly from television as we have

known it. While some of the cable channels are basically the same as traditional forms of TV, we use others in new ways. Some of the new cable services are best described as "background channels." These news, music, and sports networks are there whenever we want them. We can use them much the way we do radio.

Still other cable services fall into the "delivery" class. A wealth of movies and programming are offered by the "premium" TV channels—more, perhaps, than we have time to absorb. Despite clever scheduling, we seldom see everything we want and for which we've paid.

Many of us use pay-TV channels as an electronic subscription service. We consult the pay-TV schedule and program our VCRs to capture each movie we want to see. Late at night or while we're at work, the cable delivers the program and our machines dutifully perform their tasks. Since pay-TV channels schedule certain programs at times that are inconvenient to some, this becomes the only way to fully use the service. In effect, we have copies of these programs—not much different from the "legitimate" prerecorded versions—electronically delivered to us.

Unfortunately, the intricacies of

BY TIM ONOSKO

WHY TAPES, DISCS, AND CARTRIDGES MAY SOMEDAY BECOME OBSOLETE

1984 may be the year when many new plans combine existing mass media and their technologies.

copyright law have not kept up with the information boom, and it may not be legal to use a video recorder for this purpose. Still, this practice is the inspiration of at least one new communications service set to debut this year. That service is Tele1st, a project of the American Broadcasting Company. Here's how it works.

Many if not most of ABC's affiliate stations do not operate at night, and Tele1st is designed to exploit that time. It will deliver its products, recent motion pictures, to homes in the middle of the night. Subscribers will program their VCRs to record scrambled over-the-air broadcasts, then use Tele1st's descramblers to play them back. Special encoding will assure that the films will only be viewable for a period of time, after which they cannot be descrambled. You could say that copies of the movies delivered via Tele1st self-destruct to prevent unauthorized viewing. These are electronic rentals, not sales.

There's no way to tell if Tele1st will succeed, especially considering the wildfire growth of pay-cable channels, but it is one vivid example of an electronic delivery system. If Tele1st or a similar plan caught on, it might change the way movie videocassettes are sold and rented.

It isn't difficult to see the parallel between taping movies from broadcast (or cable) TV and taping records from the radio. To promote listenership, some FM stations play new albums without interruption, cuing many home listeners to tape the albums rather than buy them. This practice is at the heart of the music industry's running feud with electronics manufacturers.

It also sparked the idea for the Digital Music Store envisioned by electronic-delivery pioneer William von Meister. Von Meister's plan was to create an audio-only service of several music channels. While some of these would be radio-like "listening channels" of classical, popular, jazz, and country music, its focus was on selling record albums electronically.

Subscribers would telephone a toll-free number to request the "purchase" of an album featured on the service. By attaching a cassette recorder to a special decoder (with its built-in timer), only paying customers would be able to record the album. Each recording would require a separate charge. Von Meister's vision went so far as to

include a monthly guide with cutout labels and liner notes, so that each recording would be as close as possible to a store-bought copy. And, he claimed, transmitting all the music *digitally* would insure commercial-quality copies.

The Digital Music Store never materialized, but remains a good idea. Nor has this setback deterred von Meister from his most recent electronic delivery project, called GameLine. GameLine, which began operation last summer, delivers video games to subscribers via telephone.

To accomplish this, the company has designed an attachment for the ubiquitous Atari VCS video-game system. The \$60 cartridge contains a modem (for *modulator/demodulator*) and its own memory. The modem interprets audible tones which represent the game program sent over the phone, then stores the program in its memory. In addition, special circuitry "signs on" each subscriber when a local or toll-free connection number is called. A designated number of plays are offered for about \$1 per call. When the limit has been reached, the game no longer functions. Of course, the memory within the cartridge can be loaded and reloaded almost indefinitely.

In addition to games, von Meister hopes to use the modem cartridge to offer a stock-quotation service (StockLine), sports scores (SportsLine), and an electronic mail service. Typing messages might be awkward, however, since characters will be selected using a game joystick.

GameLine and its related services may be cut short, however, because of the waning popularity of the Atari VCS. Even as a game computer, the little box has been trampled by cheap new machines. The new breed of inexpensive personal computers lends itself a great deal better to telecommunications and delivery systems. With modems, they can "talk" to computer information services, such as Dow-Jones News Retrieval, Dialog, CompuServe, or the Source. The last is another von Meister origination, though now owned by *Reader's Digest*.

GameLine, too, is threatened by a recently announced telephone/computer service to be created and operated by AT&T (Bell) and Coleco Industries, maker of the Adam computer system. Though details of the venture were not disclosed, the two companies will offer information and data services, as well

as electronically delivered games and other entertainment computer programs. Some industry analysts regard this as one of the most potentially powerful communications alliances yet.

Games and computer software can be delivered by telephone lines to stores as well. Why not return the "milk bottle"—a game or computer program cartridge, for example—to a store for a "refill"? This is precisely the plan of Romox, a new company that has designed a system to sell and reload computer and game cartridges.

According to Romox's software plan, you will buy empty game cartridges containing microchips that can be programmed, then erased and reused hundreds of times. Two technologies for this already exist. One is called EPROM (for Erasable Programmable Read Only Memory), which is erased by bathing the chip in ultraviolet light. Other such chips, known as EEROMs (for Electronically Erasable ROMs), are cleared by applying the correct electric voltage to the chip.

Romox's programming console is a computer with slots to accommodate most popular sizes of computer and game cartridges. Programs loaded into the console are "blasted" into the chips inside the cartridges. The company contends that the software stores of the future will need to carry thousands of dollars in inventory if they want to sell every new computer program in dozens of incompatible formats. A Romox-equipped shop, however, will only need the programming machine and a suitable stock of blank cartridges. Presumably, consumers will own a few blanks, getting them refilled in rotation and occasionally adding a few to their libraries. Romox will split the money derived from program sales with publishers and authors.

The link between telephone and computer is vital to the future of electronic delivery. As the cost of modems and telecommunications software are dropping, new forms of "dialup" services are springing up.

One of the most interesting of these is Los Angeles' Buy-Phone. An electronic "yellow pages" supported by businesses that list with a service, residents can dial Buy-Phone without charge using any small computer and modem. Users indicate the neighborhood or district in which they live, request information by category,

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Electronic Delivery

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and Buy-Phone returns names and addresses of stores, restaurants, theaters, and services organized by location—from closest to farthest—to minimize travel. Buy-Phone could well be a model for the future of commerce. Just one more step, an automated order desk, could turn it into a total shopping service.

Buy-Phone, the Source, CompuServe, and Dow-Jones News are all highly interactive services known generically as "videotex." Their little cousins are "teletext" services, which usually use a few of the unused lines at the top of a TV signal to send their precious digital information. Already one national teletext service, Keyfax, is in operation (see "New Channels," January 1984 and "Fast Forward," February 1984).

Current plans for teletext services imagine them as national magazines of varied information: news, weather, sports, financials, and features. The systems that used those otherwise-unused lines of a video signal are usually restricted to from 100 to 200 screens of data accessed by a decoder box. Systems like this include Keyfax and proposed services from NBC and CBS.

Though teletext could be a useful supplement to other, more conventional information sources, many questions remain unanswered. Will teletext be offered free as a kind of nationwide version of the neighborhood newspaper, or will users of the systems pay for it? If the latter, how much is such information worth considering teletext is restricted to letters, numbers, and crude graphics on a TV screen? Will people buy the necessary decoders, rent them, or will they be built in as a common feature of all future TV sets? Teletext's future remains clouded by a lack of answers to these questions. But what of the oldest of media, the word on paper? After all, it was Gutenberg's invention of movable type that led to the first mass medium. One thing is clear. While teletext and videotex have

been touted as electronic newspapers or magazines, they will probably never replace the printed word. Papers and magazines are easy to consult and don't rely on the availability of a TV set. There is also their "serendipity factor." We glean much information by skimming printed matter while looking for what we are interested in. While on the way to the daily weather report, for instance, we might run into interesting and important stories we didn't know about. Since videotex is often searched by topic, it delivers only what is requested—nothing more. Teletext is slightly better, since you can browse through its volume of pages, but that can be a slow process. For better or worse, however, even printing is going electronic. The latest buzz in the graphic-arts industry is laser printing. Developed by Xerox, Hewlett-Packard, Canon of Japan, and others, it works this way.

Copying machines, like Xerox copiers, work on the principle of an image focused on a specially sensitized drum or plate. Parts of the plate corresponding to the image are electrically charged and attract a finely powered ink. A short but intense burst of heat fuses the ink to a piece of paper placed in proximity to the plate, and transfers the image to the paper. Because static electricity is the charge that attracts the powder, this process is called "electrostatic" copying.

It is possible to "paint" the image on the charged drum or plate in much the same way that an electron beam forms a picture on a TV picture tube. Instead of electronic energy, though, a com-

puter-controlled laser is used to scan the drum in a series of fine lines. Turning the laser on and off in the appropriate spot in each line forms the image. Once the full picture has been formed, an electrostatic copy is made. The printer's computer can be programmed to reproduce anything from photos to text set in type, and laser printing combines all the elements of a layout in one single pass through the machine. No typesetting is necessary since the computer determines the shape and spacing of each letter and photographs are automatically converted to halftones (like the pictures in this magazine) by a digitizing process.

This opens the door for a new era of electronic publishing. Not only can a computer's video screen be used to prepare the elements of the printed page, but the content of each page can be updated and printed immediately. Imagine a bookstore without books. Instead, you order a copy of the latest bestseller and the laser printer manufactures one for you on the spot. Or, if you choose, you might even decide to change the name of a novel's central character to your own for the ultimate vicarious reading experience. If you need a book for your work or for school, you could wait for the most recent edition of a text or reference work. Come back later in the afternoon when the author—in another city, or even another country—is scheduled to finish his update.

Electronic printing isn't a fantasy. Limited custom publishing of business and technical works will occur in 1984, and spread as the computer

and laser-printing technology improves in quality and drops in price. Laser printers may never make it to your bookstore, however. They may bypass it on the way to your living-room because manufacturers expect some form of affordable laser printer to be available to personal computer users before the end of this decade.

Laser printers are also part of perhaps the most exciting new electronic-delivery service. MCI is the company that challenged AT&T's monopoly on long-distance telephoning, and won. Now MCI is prepared to take on an even older establishment: the U.S. Postal Service. MCI Mail will allow users of personal computers, word processors, and data terminals to send messages to one another. For one dollar, MCI will instantly transmit a message of about 1000 words to another computer or terminal. Or you may ask MCI to print that message at one of its 17 laser-printing centers closest to the message's destination. MCI will print and mail the letter, memo, or manuscript for \$2, deliver it overnight for \$6, or, in some cases, may even race the printed message to the recipient within four hours for a \$25 charge. Since the laser printer can scan and digitally store graphic images, you can even register your letterhead and signature with MCI Mail, which will use it every time you send an electronically printed letter.

One happy byproduct of this technology may be a wall-size color TV picture of excellent quality, drawn by lasers. The same optional scanners being designed for laser printers could

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conceivably be used for just such a video projector. That brings us full circle, from paper to video.

The year 1984 will not be the one foreseen by George Orwell and the prophets of the past (thank goodness). But it will be remembered as one more year of maturing technologies on the never-ending road to the future. **V**

Chuting

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skilled competitive teams, each jumper having logged thousands of dives. I am the cameraman for the World Champion Team—Mirror Image. We use videotape extensively, taping each practice jump and reviewing it countless times in both normal speed and slow motion. The competition involves 8 members per team, and the team that can complete the most assigned formations in 50 seconds wins. With 8 jumpers falling at 200 feet per second and flying together to form various intricate formations, video becomes a valuable tool.

Another commercial application of skydiving video remains untapped: demonstration dives. Since the advent of the "square" or Ram Air parachute, divers have been asked to do demo jumps at events ranging from county fairs to the World Series. The first time I videotaped a demo jump was at a county fair. The crowd enjoyed the jump itself, but the response to my videotape of jumpers in freefall, shown on a big-screen TV, was incredible.

The same thing can be done on a larger scale. It is entirely possible to land a skydiving team in the middle of, say, the Super Bowl and, after the landing, show the jumpers' viewpoint on the large-screen scoreboards while also broadcasting it direct to the TV audience. It would be a great halftime show as well as good publicity for the sponsors. The equipment to transmit skydiving demos live is available—it uses a small video camera combined with a sophisticated helmet-mounted transmitter.

As a Screen Actors Guild member, I am involved in TV commercials or movies from time to time. Freefall footage for television or film is generally shot on 16mm or 35mm film, but videotape can still play an important role. One major disadvantage of film is that the "rushes" can't be seen right away. But if I mount both video and movie cameras on my helmet, footage can be reviewed immediately upon landing. This is invaluable given the thousands of dollars spent on even a 15-second commercial, with the entire production crew sitting two miles away wondering if the shot will work out. It is easy to take to the air again and shoot from another camera angle or change

the shot in some other way, but it would be pretty expensive to leave the location only to discover two days later that something must be reshot. Three-quarter-inch equipment is also reaching jumpable size and is beginning to be used occasionally for TV footage.

So, for all you potential skydiving-video enthusiasts out there, that's how it's done. Don't forget to yell "Geronimo." **V**

Valentine

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Mood Piece

While video cards are most effective when kept short, mood pieces don't have a direct message and can be long. In February winter winds down, the slush is still on the ground, and the heat pipes coughing in a small apartment get oppressive. Why not create a valentine that takes your beloved away from it all? With a two-hour mood tape and a video projector, you can do that quite economically.

If you want a valentine dinner at the beach, set up the camera and record two hours of the waves gently rolling up on the sand. Eat dinner in front of the TV, using the picture and sound as background. If business calls you to some exotic port, record two hours at a Paris cafe, beside the grand canal in Venice, or at a market in Kathmandu. Set up your camera in a grove of quivering aspen trees, or beside a mountain stream—and bring home those wild places.

If you recorded fireworks last July 4th, you can edit a powerful mood tape by repeating each burst many times and cutting out all the black sky between volleys. Then sip a glass of wine, look into each other's eyes, and let the fireworks erupt.

There is no limit to what you can do with this kind of tape. You can point your phenomenological camera at mountain ranges as the sun sets, at clouds rolling across the sky, at the tides rising and falling, at city streets filling up in the morning and emptying out at dusk, or at a bonfire slowly dying into coals and embers.

Every year, you read of someone who rents a billboard as a valentine card to publicly declare affection. Maybe next year we will read of bulletin boards on public-access cable channels, devoting February 14th to locally originated video valentines. **V**

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WARNING!

MAILORDER BUYERS BEWARE!

Can you really buy with confidence through mailorder? No! Not unless you remember the following guidelines:

- 1) Does the company work out of a P.O. Box? If so, you are going to have a hard time knocking on their door when you have a problem. You must have a street address!
- 2) Are they the "World's Largest..." except you have never heard of them before? Beware of exaggerated claims.
- 3) Is their offer too good to be true? Then it probably isn't true. Presently there is a company making the following offer: "10 full-color feature films for only \$99.00!" The catch is that they say "full-color" not full-length feature films. What you will receive is a 60 minute preview tape! Their name continually changes but their offer is always too good to be true!
- 4) The size of the ad has nothing to do with the honesty of the company. Recently a video company used a double-page spread on a "buy-one, get-one-free offer" — and never delivered.
- 5) Is this the first time you have seen the company's ad? A company that advertises repeatedly in the same publication has to keep their customers satisfied — otherwise the publication will drop them upon receipt of proven complaints. A consistent advertising campaign is an excellent indication of a company's stability and responsibility.
- 6) Will they only accept cash, money order, or a certified check? One of your best defenses against being taken by a disreputable mailorder company is to use a Visa or MasterCard bank card. When you use these bank cards, and the mailorder company attempts to swindle you out of your money, under the Fair Credit Billing Act you have the right to contest this charge. This is your best form of mailorder insurance! Any other manner of payment is near impossible to retrieve once you have put it in the mailbox.
- 7) If you have found out that you have been bilked, immediately contact the publication in which you saw the ad. Hopefully, they will be able to assist you.
- 8) Is the company actually selling a product, or is it a 16 page catalog that they are trying to peddle for an exorbitant fee? Are they unwilling to give free information about themselves? If so, why?
- 9) When will they deliver? 6 days? 6 weeks? 6 months? If the company is truly set up for mailorder — meaning that they have the products that they are advertising — you have the right to expect your order to be shipped within 24 hours 99% of the time! A good mailorder company can deliver coast-to-coast within 3 to 4 days.
- 10) Lastly, if you forget all of the above — just remember to use your Visa or MasterCard as your first line of defense.

We are a mailorder company and we want you to know!

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